

# AMERICAN RAILROAD JOURNAL,

## IRON MANUFACTURER'S AND MINING GAZETTE.

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Saturday, June 10, 1848.

#### To Contractors.

It will be seen, by the following notice, that the people of Hartford, Conn., and Providence, R. I., have decided to have a railroad communication between those important points without much delay. By a map of the Providence and Plainfield railroad, accompanying the report of Mr. James Laurie, in relation to that work—which is to be a part of the line from Hartford to Providence—it appears that from Willimantic, some miles east, it will follow the route of the proposed New York and Boston "air line" road. The construction of this road across the country will accommodate a large amount of business and travel, and add materially to the business of the cities of Hartford and Providence; and it is a work worthy the attention of those seeking contracts.

**HARTFORD AND PROVIDENCE RAILROAD.**—Notice to Contractors.—Sealed proposals will be received by the Directors of the Hartford and Providence Railroad Company, at their office in the city of Hartford, near the Postoffice, until the 1st day of July, for the Grading, Piling, Masonry and Bridging of that portion of the road extending from the east bank of Connecticut River to Willimantic, about 29 miles.

The Maps, Profiles, Plans and Specifications will be ready for examination on and after the 26th day of June.

The line will be divided into convenient sections, and proposals may be made for one or all the sections, or for the whole work except the superstructure.

EDWARD H. BROADHEAD,

Chief Engineer H. & P. R. R.

Engineer's Office, Hartford,

May 27, 1848.

Office St. Lawrence & Atlantic Railroad Co.,  
Montreal, June 2d, 1848.

**NOTICE TO CONTRACTORS.—SEALED**  
Tenders, (directed under cover to the Secretary,) will be received at this office, until the 24th inst., for the Laying of the Superstructure upon the Montreal Division of the St. Lawrence and Atlantic Railroad, extending from the River St. Lawrence to the Village of St. Hyacinthe, a distance of about Thirty Miles.

Plans and Specifications will be ready for the inspection of Contractors, on the 15th of this month, and they are respectfully requested to make application to the resident engineer of said division (R. T. Bailey, Esq.) for information in regard to the manner in which the work is to be performed.

No Tender will be considered unless accompanied by the names of two respectable sureties, personally known to the company or engineer, and, in all cases, undoubted security will be required.

The work must be commenced on the 1st July, or immediately after the contracts are closed, and completed by the 1st of October next.

THOMAS STEERS, Secretary.

#### Pennsylvania and Ohio Canal.

We take pleasure in furnishing the following information respecting this work, the stock of which is held principally by our citizens:

The entire line of canal is in fine order, the damages occasioned by the flood at the close of the navigation last fall having been repaired in season for opening navigation at the earliest period.—The Ohio and Erie extension canals were opened in the spring.

The amount of tolls received up to 31st May, 1847 and 1848.

At Youngstown in 1848	\$8,546
" " " 1847	6,621
Increase in 1848	1,925
At Ravenna in 1848	\$3,153
" " " 1847	2,348
Increase in 1848	805
At Akron to May 1, 1848	1,279
" " " 1847	973
Increase in 1848	306

Total increase in 1848, up to 31st May..... 3,036

The following gentlemen have been elected directors for the ensuing year, viz:—

Leicester King, George Parsons, Francis Freeman, Jacob Perkins, of Warren, Ohio; Seth Day, Ravenna; Charles T. Whippo, New Castle, Penn.; Robert Toland, Philadelphia, Penn.—And the governor of Ohio has appointed Thomas D. Webb, of Warren, and Cyrus Prentiss, of Ravenna, as directors on the part of the State.

We understand that it is the design of Leicester King, Esq., the president, to resign his seat in the board, and it is probable that Thomas D. Webb will be his successor.—Penn. Ing.

#### Cleveland and Pittsburgh Railroad.

We learn from a letter dated Ravenna, Ohio, May 25th, 1848, that "the work on this line is going forward rapidly, more than one-half is under contract, and twenty-five miles more is now being located from Hudson to Cleveland. The whole route has now been surveyed and found to be very cheap of construction. The whole length of the road is 97 miles from the river to the lakes, passing through a rich and thickly populated country, and passes in-exhaustible beds of bituminous coal. The friends of the road have entire confidence in its paying dividends equal to any road west of the mountains."

And so have we confidence in the entire success of the road, when completed, which we hope may be the case at an early day.—[Ed. R. R. J.]

#### Nashville and Chattanooga Railroad.

The surveys of the Nashville and Chattanooga railroad are, we understand, progressing rapidly; and a considerable portion of the road will probably be prepared for contract by an early day in July.—The work to be first let is that passing over the Cumberland mountain, consisting of one tunnel, and much heavy work—offering strong inducements to contractors of skill and experience. The country is healthy, and provisions are cheap and abundant.

The work is 152 miles in length, connecting at Chattanooga, on the Tennessee river, with the Western and Atlantic railroad of the State of Georgia. This road is 139 miles in length, (of which 39 miles are unfinished, but under contract,) extends to Atlanta in Georgia. This place is connected with the Atlantic coast at two points. The Georgia railroad, 171 miles long, extending to Augusta, and the South Carolina railroad, 136 miles, thence to Charleston, forms one line; and the Macon and Western railroad, 101 miles, and the Central railroad, 192 miles, form another line passing through Macon to Savannah. Thus the Nashville and Chattanooga railroad will be finished under peculiar advantages, having 738 miles of finished road, leading through Georgia and South Carolina, and thus connecting it with market. The country traversed by this road is one of vast mineral and agricultural wealth, filled with a hardy, industrious and intelligent population. Its resources, though undeveloped, for want of easy access to a market, are truly gigantic. A large proportion of its lands, of inexhaustible fertility, lie uncultivated, and its coal and iron still slumber in their native beds.

With the local trade of such a country, added to the great commerce to be expected at its terminus on the Cumberland at Nashville—which is indeed a







Boston to Pensacola through the most densely populated and prosperous region of country.

A line connecting Columbus with the Macon and Western road, has also been chartered, and one from Macon to Fort Gaines is now, we believe, in course of construction, which also looks to Pensacola as a terminus. When these various lines, together with the line to Nashville, shall have been completed, then we may anticipate a prosperous business for the line here indicated, as well as the lower line through Wilmington, for they must complete that line in self-defence if this line is made—and then we shall see the south and the north connected with bonds of iron, well calculated to make the people of the different sections know and appreciate each other more correctly. A few years only—less than ten—will accomplish all these, and many other lines in those States, increasing the amount of business and value of property in the south to an astonishing extent.

#### Railway Traffic.

The following report of railway traffic for the week ending about the 20th April, shows a large increase of mileage during the last year, and a very considerable reduction in the per mile earnings. It does not follow, however, that there has been so great falling off on the old lines, or where the traffic had been developed, but it arises mainly from bringing into use so large a proportion of the whole mileage, upon which a comparatively small traffic has yet been drawn out. Nor will the dividends be proportionally reduced, as a large proportion of the recently finished lines has been completed at a greatly reduced cost. The Chronicle says:—

"From our official returns, it appears that the amount of traffic for the last week on 3,663 miles of railway, was £175,472, thus accounted for:—£26,385 for the conveyance of passengers only, £44,942 for the carriage of goods, and a remainder of £44,145 for passengers and goods together, not respectively apportioned; being an increase of £14,536 over the corresponding week of last year, when the mileage was 2,812. The average earnings per mile last week were £48, whilst in 1847 they were £57.

#### Working Expenses on Railways.

We find the following comparative statement of the working expenses on traffic on four English railways, in a report of a committee raised by the London, Brighton, and South Coast railway company, made on the 13th of April last. The duties of this committee were various, but this does not appear to have been included, yet they say:—

"The committee have thought it their duty to inquire minutely into the working expenses, and to institute a comparison between those of the Brighton and of other lines similarly situated, for three years ending the 31st of December, 1847. The working expenses of the Brighton line for the last year are certainly much above the average; but even these do not greatly exceed the averages of the South Western, and Eastern Counties lines for the three years, and the general average of the Brighton will be found much less than those of the two lines just mentioned, although not so low as that of the South Eastern, as will be seen in the following table:—

#### Percentage of Working Expenses on Traffic.

	1845	1846	1847	Average
South Western	34.49	39.11	42.75	38.74
Eastern Counties	33.68	34.96	36.26	36.70
Brighton	38.11	31.55	39.39	33.01
South Eastern	32.46	29.99	28.63	30.15

"In connexion with this subject, the committee examined into the state of the plant, and ascertained that the company's stock of engines, carriages, trucks, and wagons, including those contracted for, which form an item in the statement of liabilities, will be amply sufficient to work the existing mileage. The

present number of engines is 97, of which 67 are in sound working order, 19 are under repair and alterations, and 12 are to be repaired and altered. The new engines, being of greatly increased power, will replace some of the present stock, which will be disposed of, and there will consequently be a considerable reduction in the above item. If the plant, when so completed, be fairly kept up, there will be no occasion for further outlay of capital under this head. The committee have taken into consideration the office filled by Mr. P. Clarke, and fully admitting his abilities and knowledge of railway business, they are, nevertheless, of opinion that there should be an efficient head of each department, who should be immediately responsible to the directors; and that it is undesirable that any one servant should interfere with the management of every other department, thereby destroying the responsibility of the officers, so interfering with, and impairing the efficiency of the board itself. The Lewes station is an illustration of this mischief arising from such interference. This station, as originally designed, would have been parallel to the main line, which is obviously the proper position; but Mr. Clarke was permitted to take the matter out of the hands of the engineer, and to build the station on its present inconvenient site, and that, too, at a cost far beyond the original estimate."

Possibly other companies may find it for their interest to adopt the last suggestion of the committee, and not lay too much responsibility upon, or require too much labor of, those charged with the management of their affairs.

#### Locomotive Engines.—Rogers, Ketchum, & Grosvenor, Patterson, N. J.

When on a visit to New York last week, we made a short visit to Patterson, and while there spent a couple of hours in passing through the different shops of Messrs Rogers, Ketchum, & Grosvenor's locomotive establishment.

On inquiring at the office for Mr. Rogers, who has the principal direction of the business, we were told that he was in one of the shops, and after a little time we found him mounted on the fore part of an immense 10 wheel locomotive—weighing 24 tons, built for the New York and Erie railroad—superintending the fitting of the valves to the cylinders. So intent was he upon the important and delicate job in hand that we deemed it improper to disturb him, and therefore availing ourselves of the range of the premises given us, we strolled first through the main locomotive shop, where we found eight engines in progress of construction, and one only vacant stand. Of those in progress two were nearly completed, viz:—one six wheel engine, with six feet drivers—a beautiful machine—for the Mansfield and Sandusky, Ohio, railroad—and a ten wheel engine, with six feet drivers. This is one of the largest class, and most beautiful engines ever built in this country, and being of six foot gauge, there is ample room to arrange its machinery without crowding it.

Two or three others were far advanced towards completion, while others were in different stages of progress—but we saw none remaining about the shop that were completed, which shows that the demand is fully equal to the supply, and that the reputation of the engines from this manufactory are second to none made in the country.

After looking through the different shops, we came to the conclusion that, in labor-saving machinery this establishment is in no way behind its competitors, either in this city or in Boston; yet we thought of one beautifully operating implement which they ought to have, viz:—"Kirk's steam hammer," for forging their great variety of articles from a locomotive axle and frame down to a cotton spindle—and almost to a darning needle. They would, we are quite sure, find it an improvement upon their old hammer—a very good one though it be.

The following account of the performance of an engine from this shop is from the Sandusky city Daily Mirror of 12th of May.

"Big Load.—The engine named 'Licking,' built by Messrs. Rogers, Ketchum, & Grosvenor of Patterson, N. J., for the Mansfield and Sandusky City railroad company, came in yesterday with a train about 650 feet long, of 51 loaded cars; the tonnage of which (cars and freight) was about 330 tons. Adding engine and tender, with wood and water, which she drew up 16 feet grades, with 110 pounds of steam, with perfect ease. This engine was built expressly to order, has single drivers, six feet in diameter, placed behind the fire box. Her construction is less complicated than other engines of her class, and can make great speed if required, and never fails to make a requisite supply of steam. She has been in service about one year. In oil and repairs her expense is about one-half less than those of our double driver engines."

#### Railway Sleepers Improved.

We find, in the Arizona for May, a description of Mr. Fred. Busse's invention for making railway sleepers. We give a short extract from the description, as follows, viz:

"My sleepers," says the patentee, "are manufactured by hand, just on the spot where they are to be wanted. I have cast sleepers according to my invention, 8 feet long, 14 inches broad at the base, at an outlay of less than one Prussian dollar, (three shillings sterling,) the piece."

"The principle of my invention is to enclose a frame of entirely dry wood, air tight, in a substance which is not affected by the influences of wet and air, it being the result of experience that under such circumstances the wood will not be destroyed at all, or at least will last far longer. The method after which I build, and compose the said sleepers is as follows, viz:—

"I take two pieces of wood, dried to the highest degree by artificial heat in a stove. Immediately after drying, I dip those pieces in a boiling of ten pounds of brimstone, one hundred pounds of cast iron, to which I add eighty pounds of very fine powder of caustic lime. This done, I scratch or take off with a knife the superfluous compound, leaving only a thin coating on the wood. The pieces of wood thus prepared are brought anywhere along the line of railway where coarse gravel is to be found; it may be taken out of the soil, or from a river. The latter is the best, having less earthy matter. The gravel mixed with fine or coarse sand, or small stones—the latter to an inch in diameter—ought to be dried, or rather heated, before used. The wooden frame is placed, the top side to the bottom, in a conical iron, or wooden mould—the latter is to be preferred—which is to be filled up with the compound, which I call *terresin*, and which is prepared as follows, viz:—I take an iron vessel, large enough to hold a quantity of *terresin* sufficient for three sleepers. I melt ten pounds of brimstone, add twenty-five pounds of stiff coal tar, and mix it by stirring with one hundred pounds fine powder of well dried, fresh burnt caustic lime, slacked in the air, or with a little water. To this compound add, always stirring and turning the mass over a gentle fire, ten or twelve cubic feet of that before mentioned heated gravel, and fill, or rather ram the thick hot compound into the moulds, in which the frames are placed. The moulds must be well heated with clay, and fine ashes sifted over it to prevent the adhering of the compound to the mould."



This is the process of making the sleeper—which he says will weigh about four hundred pounds when done. It may be a very good sleeper, but it will be found expensive and difficult to handle.

#### Dublin and Kingstown Railway Report.

We have occasionally given the report of this company, by way of illustrating the advantages of railways in connection with large cities, to the laboring people, and their profit to the shareholders, when properly managed to accommodate the masses at reasonable rates. Here is a road of about seven miles in length, from Dublin to Kingstown and Dalkey—which is managed especially to accommodate the laboring portion of the people, as well as those who have leisure. Hundreds who labor in Dublin live at Kingstown, or along the line of the road, and others living in the city are often employed out of it—and the trains are so arranged as to accommodate this class of persons, both early and late, and at very low rates of fare.

So might it be in the vicinity of New York and Philadelphia, if the companies would devise plans by which little settlements would be formed along the line, and a certain and cheap means of reaching them established. The report is as follows, viz:

The sixteenth annual meeting of the above railway company was held on Saturday, April 15th.

Joseph Kincaid, Esq., having taken the chair, Mr. Plm read the following report of the directors.

In pursuance of the declared intentions of the board, in their report to the last half-yearly general meeting, they now submit a statement of accounts for the 12 months ending the 29th February, together with the usual statistical returns.

Number of passengers booked at all the stations.....1,582,182  
Last year.....1,668,650

Decrease.....86,468  
Estimated trips by subscribers.....645,964  
Last year.....635,260

Increase.....10,704  
Gross number of passengers, subscribers included.....2,228,146  
Last year.....2,303,910

Decrease.....75,764  
Subscriptions received.....£7,984 6 3  
Last year.....7,901 0 10

Increase.....83 4 5  
Gross income from all sources.....51,740 3 10  
Last year.....54,053 0 10

Decrease.....£2,312 17 0  
Classification of passengers for the last seven years, including subscribers.

Years ending last day of February.	First class.	Second class.	Third class.	General total.
1842.....	37,001..	840,116..	754,968..	1,632,085
1843.....	68,156..	960,936..	739,788..	1,768,879
1844.....	96,076..	1,047,266..	814,733..	1,962,051
1845.....	104,109..	1,219,856..	910,768..	2,234,733
1846.....	141,911..	1,235,524..	913,178..	2,348,613
1847.....	152,369..	1,304,798..	846,733..	2,303,910
1848.....	164,666..	1,280,081..	783,399..	2,228,146

	1845.	1846.	1847.	1848.
Trains dispatched.....	30,745.	30,970.	32,479.	32,096
Miles travelled.....	184,470.	185,820.	194,874.	192,570
Av. coaches pr train.....	7511.	7550.	7383.	6990
Av. passengers, do.....	72,676.	75,830.	70,935.	69,433

	1845.	1846.	1847.	1848.
Consumption of coke per train pr mile.....	24.220.	26.740.	28.503.	28.766

	1845.	1846.	1847.	1848.
Average receipts per passenger pr mile.....	0.893.	0.883.	0.893.	0.883

Total expense per train, per mile.....3 2d  
Dublin and Kingstown line, (including all charges of establishment).....2 7d  
Dublin and Kingstown, (exclusive of direction, office expenses, taxes and baths).....2 7d  
Kingstown and Dalkey line (all charges).....1 4d

#### Third-class morning tickets, year ending February.

1842.....	30,514
1843.....	37,310
1844.....	116,920
1845.....	174,802
1846.....	192,154
1847.....	180,356
1848.....	178,651

"It is cause of great regret to the board again to have to announce a considerable falling off in the revenues of the company, but you will have been prepared to expect this from the published weekly statements. It will, however be satisfactory to you to be informed that, since the 1st February last, there has been a progressive improvement in the receipts as compared with the corresponding portion of the previous year; and it is also satisfactory to observe that, notwithstanding the general depression, the subscriptions for the last year have amounted to a greater sum than has been received in any previous one."

"There is, however, one source of large expenditure which is not within the control of the board: the rates and taxes during the past year have been £2,643, being £1,540 more than the previous year. This increase, added to the deficiency of income, amounts to £3,852, being more than 14 per cent. on the paid up capital."

"The Dalkey line has been worked with great regularity, the working expenses have been considerably reduced."

"The Waterford, Wexford, Wicklow and Dublin railway company have brought a bill into parliament, to legalize and confirm the amicable arrangements with them, reported to you at last half-yearly meeting."

"The balance of the profit and loss account, applicable to dividends, is £7,488 5s. 7d.; and the board declares a dividend for the half year of 43 per cent. on the paid up capital of £245,000, amounting to £7,350, which will be payable on and after the 1st May."

[From the Philadelphia "Commercial List."]

#### Pennsylvania Coal Trade for 1848.

##### From the Lehigh Mines.

The amount of coal shipped from the Lehigh mines during the week ending the 30th May, and since the opening of the navigation, has been as follows:

	This week.	Total this year.
By Lehigh company.....	7,459 05..	44,571 18
By Room Run.....	3,848 04..	28,092 00
By Hazleton.....	3,160 00..	18,336 00
By Beaver Meadow.....	2,950 00..	17,184 00
By Spring Mountain.....	1,663 11..	12,663 19
By Buck Mountain.....	2,760 12..	14,855 09

Total.....31,840 12.135,703 06

\* The amount shipped last week should have been 2,050 tons, and not 1,050, as printed.

##### From the Schuylkill Mines.

The amount of coal forwarded by Reading railroad during the week ending the 1st inst., and since the 1st of January, has been as follows—

	Tons.
From Schuylkill Haven.....	13,183 61
" Pottsville.....	4,410 09
" Port Carbon.....	9,472 12
" Port Clinton.....	4,139 16

Total this week.....31,204 18  
Total this year.....454,219 19

The amount of coal brought to market by the Schuylkill canal during the week ending the 1st inst., and since the opening of the canal, has been as follows:—

	Tons.
From Pottsville and Port Carbon.....	11,510 15
" Schuylkill Haven.....	3,574 00
" Port Clinton.....	000 00

Total this week.....15,084 15  
Total this year.....99,651 02

#### Recapitulation.—Total Shipments this Season.

By Lehigh companies.....	135,703 06
By Reading railroad.....	454,219 19
By Schuylkill canal.....	99,651 02

Total.....689,574 07

#### Pennsylvania Railroad.

The Pittsburgh Gazette of 1st inst. gives the proceedings of a convention of delegates from the different districts, composing the county of Allegheny, held at Pittsburgh on the 31st ult., in relation to the Pennsylvania railroad.

It says, "the meeting was called to order by Geo. Darsie, Esq., who nominated for president the Hon. Judge Grier. The following gentlemen were named as vice presidents—Samuel Jones, Esq., of Pittsburgh, and R. H. Porter, of East Deer; with Jesse Carothers and — Meade, as secretaries."

"The following letter, from S. V. Merrick, Esq., president of the Pennsylvania railroad company, was presented to the chairman of the convention, by Judge Wilkins, and read by the secretary:

To the President of the Railroad Convention of Allegheny County.

"Sir—In transmitting to you the inclosed resolutions of the directors of the Pennsylvania railroad company, in which I am authorized to assure the commissioners of the county of Allegheny that the supplement to their act of incorporation, approved 27th of March, 1848, has been duly accepted by the stockholders of that company, and that, under its provisions, the six per cent. bonds of the county of Allegheny will be accepted in payment of stock subscribed by them; and that an interest of 6 per cent. per annum will be paid to all stockholders, until the road is completed. It may not be improper in me—and may be satisfactory to the convention—briefly to state the intentions of the board in case a subscription of twenty thousand shares is made by the county commissioners, under the sanction of the convention."

"When the Pennsylvania railroad was projected, it was conceived by its friends to be too large an undertaking to be completed by individual means, and at the same time that it partook so much of the character of a great public work, as to warrant assistance from the common fund. In this view, the city of Philadelphia, in its corporate capacity, determined to lend its aid, and subscribed twenty thousand shares, to take effect when a similar amount was had from other sources; and authorized an additional subscription of twenty thousand shares, whenever a further subscription to that extent should be made in aid of the work."

"The original amount, now reaching thirty-two thousand shares, has been devoted exclusively to the road on the eastern side of the Allegheny, and which, with the funds daily being added by private subscription, will, in ample time, be adequate to the object."

"At that time, the policy of the board was to complete the eastern section, in connection with the State railroads, so as to form a continuous line, with as little delay, and to as great an extent as possible, and await the effect produced upon public opinion, by the success of that portion, before soliciting funds for its continuance west—having early determined to incur no debt, but build the road upon its legitimate receipts from stockholders."

"The directors were induced to this determination, from viewing the disastrous effects which usually followed attempts at the construction of public works upon credit, without adequate means for the object."

"This policy would still be pursued, if Philadelphia was left to her own resources to complete the road; but, in considering the subject in all its bearings, the directors feel that they were playing for a great stake—no less than the unrivalled railroad trade of the Ohio and the far west—and in view of the exertions making by another company to reach the Ohio at an early period, they would not be doing justice to their trust if they did not strain every nerve for the rapid completion of the western section, which alone would secure that trade."

"With this object in view, it was determined to appeal to Allegheny county, in its corporate capacity, to furnish such a sum as would, with the amount conditionally subscribed by the city of Philadelphia, and unappropriated, warrant them in placing the western section under contract as soon as the surveys were completed."

"Hence, in August last I was directed to address a letter to the citizens of this county, urging their



subscription, in which I stated:—That the million subscribed would, under the provisions of the ordinance, (already passed,) draw another million from the treasury of the city of Philadelphia; and these two millions shall be exclusively devoted to the western division, which will be urged as fast as the nature of the country will admit.

"The motive, therefore, for your subscription, is to secure to the county of Allegheny the whole western railroad trade, by enabling the board to finish this end of the line in a period so short as to defy competition; and to this end the whole of your subscription, and an equal amount from the city of Philadelphia, is distinctly pledged by the directors.

"You will permit me to hope that the prompt action of the convention will enable them to secure this great object, and place the company in a position which will warrant an immediate call upon private subscriptions to fill up the stock to the ultimate limits required for the completion of the road.

"I am, with great respect,

"S. V. MERRICK, President of Pa.  
Railroad Company.

"After the credentials of the delegates had been received, Judge Wilkins addressed the convention in a very forcible speech. He contended that the day had come when the stand-still policy must be abandoned. Our neighboring States had determined to act, and secure the trade of the west; and if we would not be beaten, we must at once take hold of the work in hand, and urge it to a successful termination—thus defeating all competition. The importance of internal improvements was strongly shown, he said, by the growth of the city of Buffalo. That beautiful city, the equal of Pittsburg in population, in 1812 had not an existence; yet she was now a monument to testify to the benefits of internal improvements. Indeed, so important was internal improvements, that he would say, that next to Christianity and education, nothing was so essential to the development and success of a country as the adoption of the system of internal improvements. He then went on to show the advantages of position and distances the central route possessed, and showed most clearly that it was not a question of enterprise, but rather of self-defence. Virginia, Maryland, and New York, were at work, and did we not move now, we should hear on the north and south the puff of the steam horse scoffing at our stand-still policy, and reminding us that others had reaped the harvest offered us, and which we lacked the enterprise to grasp, when presented. The remarks of Judge Wilkins were frequently interrupted by indisposition, which increased so rapidly that he was obliged to desist. Before he closed, however, he made some remarks to his friends from the country, who, he thought, were under a misapprehension in regard to the effect of this county subscription. He most earnestly and honestly assured them, that in no event would a tax be called for; and that their true interests required and demanded the subscription. He had prepared a series of resolutions, but was unable to read them; but James S. Craft, Esq., proceeded to read the following for him:

"Resolved, That the commissioners of the county of Allegheny, in the commonwealth of Pennsylvania, be advised and requested to subscribe twenty thousand shares to the capital stock of the Pennsylvania railroad company, agreeably to the provisions of the act of assembly, passed on the 27th day of March, 1848, and for which they shall issue the county bonds to be redeemed not before the expiration of thirty years; and in such sums as may be agreed upon by the said county commissioners and the board of directors of the said railroad company.

"Resolved, That for the further security and safety of the said county of Allegheny, and the bond holders, and in addition to the legal obligations incurred in making said subscription, the stock so subscribed, together with the interest, earnings and dividends of the said road be pledged for the payment

of the interest and final redemption of the said bonds; but, that nothing herein contained shall in any way impair or exchange the provisions contained in the second section of the aforesaid act of assembly, making it obligatory on the said company to pay the interest on the amount of the said stock 'until the said road shall be completed,' and afterwards to apply towards the same, the profits and dividends of the said road, for the purpose of indemnifying the said county.

"Resolved, That before the aforesaid subscription shall be made by the county commissioners, they shall require the said railroad company, permanently and finally, to establish the terminus of the said road within the city of Pittsburg.

"Resolved, That upon the aforesaid subscription being made by the county commissioners, the amount thereof, together with the additional sum of one million of dollars, shall be expended by the said railroad company in the construction of this road from Pittsburg to the Allegheny mountains.

"Resolved, That a committee of three of this convention be appointed by the chair, to confer with the commissioners, as to the manner and form of the bonds to be subscribed by the county; and on such other questions as may arise, touching the issue, delivery and receipt for the same? The president appointed Wm. Wilkins, Neville B. Craig and Geo. Darsie, Esqs., the committee on the 5th resolution.

"A motion was made to adjourn, but not carried. W. W. Irwin moved to vote upon the resolutions at once, without an adjournment, as members were anxious to go home.

"The motion was renewed, but not agreed to, inasmuch as Judge Wilkins requested George Darsie Esq., to read some statistics, with which he proposed to close his remarks. When he had concluded, Judge Wilkins resumed his remarks, and in the strongest manner again assured the convention that the interests of the county could alone be saved by prompt aid to the road.

"Before the vote was taken upon the resolutions, Mr. Gibson requested leave to submit a resolution. Leave having been granted, he presented a resolution making a two-thirds vote necessary to sanction the resolution of Judge Wilkins. The design of the movement was to kill the whole question, and the convention refused to receive the resolution. The ayes and nays were then called upon the resolutions, which were adopted, 50 to 38.

"A series of resolutions were offered by a member, approving of the Connellsville route, which were adopted without dissent.

"The proceedings of the meeting were directed to be published in all the papers of the county, and the meeting adjourned."

That there should have been opposition to this measure we are not at all surprised, as there were strenuous efforts made, by some of the wise and liberal ones of this city—when it was asked to subscribe to the same noble work—to defeat the measure; and because there are always, in every community, those who are opposed to all improvements, and especially to those which are the most important for the prosperity of the business community; yet we did not suppose there could be found in Allegheny county so large a proportion of intelligent men as 38 to 50, who would oppose a measure so vitally important to the community in which they lived. The measure was however carried, and the subscription made, as we learn by the following just, and eloquent, remarks of the editor of the Pittsburg Gazette. He says:

"Railroad Subscription Authorized.—It is with great pleasure, and in the full belief that the subscription will be a source of permanent profit, as well as of present good to the community, that we announce that the subscription of one million of dollars has been authorized by the delegates to the county convention. The opposition has been very decided, and

no doubt very sincere, but the majority is large, and we believe the conclusion arrived at in accordance with the best judgment of the large body of tax payers in the county. We believe, too, that time will demonstrate not only the utility of the work, but that all opposition to it will be removed in the great good it will confer upon all classes and conditions of people. Under any circumstances the subscription was necessary to the business welfare of the county, and three years will convince every man of business of the city, and every farmer of the boroughs and townships, that the county has acted most judiciously in the aid now promised. We do not look for any increase of taxes in consequence of the subscription nor for any depreciation of public credit, or for any of the evils predicted.

"We feel that if Pittsburg would not be isolated from the world, that she should put her hand to the plough, and with an eye single to her future welfare, hasten to complete the road east, and to begin at once the prosecution of a western road. Both are as necessary to us as our coal beds, or the water in the rivers bordering upon our city. New York is seeking an avenue west, and so is Maryland and Virginia. It does not, therefore, become us to deliberate, when others act. Our exertions, until this hour have been neither of gold, or silver, nor lands, nor labor, but words—empty breath—idle declamation. We have showered down our anathemas upon one another, and headed each other long enough. Baltimore was the spring fever of 1847. Ohio was the summer fever of the year past, and in 1848 something has been done by the county to unite the west with the east. Now let our citizens off coats for a working season to unite us with the west. Both roads may be prosecuted at once, and both should be commenced forthwith."

These are the words of true wisdom and sterling patriotism.

#### Camden and Amboy Railroad.

##### Its Privileges and its Abuses.

We continue our extracts from the pamphlet of "a citizen of Burlington," commencing with his seventh letter, dated 3d March, in which he refers to the importance to New Jersey of the peach trade, and the difficulty of getting them to market by this road, at prices, and in time to send them by the eastern evening steamboats to the numerous markets in New England. If the people of New Jersey saw the disadvantages under which they labor in consequence of having granted this monopoly, they would take active measures to get rid of it, even if they had to purchase back the privileges, at almost any price, granted to a company for a mere "mess of pottage."

The writer says:—

"Of all the products of her soil, there is none by which this State should profit so largely as by that of the peach. She has hundreds of thousands of acres fitted for its production, and directly north of her are five millions of people by whom it is deemed a great luxury, and among whom there exists in vast abundance, wealth enabling them to indulge their tastes. They are rich, and they grow daily richer, for they have no monopolies.

"The peach is an article that will not keep. It must be eaten soon, or it decays, and the difference of even twelve hours in getting it to market may be the difference between great profit and almost total loss. New Jersey is close to that great market, which of right belongs to her. It would be her own, and all her own, if she could get to it.

"Delaware, too, raises peaches, but she is distant from this great market which to Jersey is close at hand. Delaware also has a market close at hand, in Philadelphia and its vicinity, into which not a Jersey peach would go, if it could get to the north. Under proper arrangements, every one of them would get there, and Delaware would have Phila-



delphia, and the country north and west of it to herself, and that is her natural market. Under such arrangements, the fruit gathered in Jersey on Monday morning could always be in Albany and Utica, New Haven, Hartford, and Springfield, Providence, Boston, and Portland, at dinner-time on Tuesday. Could it get there thus promptly, and cheaply, the consumption of the north would now be hundreds of thousands of baskets, speedily to rise to millions; and hundreds of thousands of acres of Jersey land that are now waste, would be in progress towards becoming flourishing orchards, yielding large revenues to their now poor owners. Existing farms and orchards would yield thrice the income that is now obtained, and by aid of the surplus thus obtained would these new lands be subdued to cultivation. Poor men would then be receiving good wages by aid of which they would buy lands whose crops would speedily make them rich.

"Why can the fruit of Jersey not travel thus speedily and cheaply? The answer may, I think, readily be given.

"The great monopoly has much to do. It has large taxes to collect and to distribute. It is the farmer general of the State, for which it collects transit duties upon men and things from abroad. It has no leisure to look after the business of its customers, or to regulate its trains to suit their wants, however much it may have for making regulations to suit its own, and those of the men who manage it. Its market train passes through Burlington in the afternoon, and that train carries peaches that reach New York next day at noon, and thus the fruit gathered on Monday is in that city at the very moment when it might be in Utica, or Portland, hundreds of miles further north. If gathered ripe, it is then unfit for further transportation, and it must be sold. It finds there the competition of Delaware, whose peaches can go to that market cheaply by sea, and do go there mainly because she is interfered with in Philadelphia by Jersey peaches that ought to have gone north. Both States are thus scrambling for the limited market that exists, and which is limited for no other reason than because the private interests of the Jersey monopoly forbid its extension. Prices are low, for fruit is abundant, and it will not keep. At such prices they are sold to hucksters, who retail the ripe ones, and send those which are unripe to Boston, at which place they arrive on Thursday. The Jerseyman thus loses all the advantage of his admirable position, and he remains poor when he might grow rich.

"For thus keeping fruit almost twenty-four hours in travelling about seventy miles, the company charges twenty cents per basket. From Goshen to New York, almost precisely the same distance, and on a road that has no through travel to support it, the charge would now be twelve, but if peaches were there, as here, a great article of commerce, they would be carried as cheaply as are now tomatoes, and pay but five cents per basket. I will, however, assume eight cents as the true price by the ordinary train, and show what would be then the difference.

"The farmer of Burlington who has ten acres of peach trees may have 1,000 baskets, and for the freight of these he pays.....\$200  
From Goshen he would pay..... 80

Difference, being the amount of transit duty... 120

"Here we have an excess amounting to twelve dollars an acre. In consideration of paying this enormous tax, he is permitted to get his fruit to New York, there to be sold at a low price, or there to rot on his hands, when if competition were permitted, they could at the very same hour be in Western New York, Connecticut, Vermont, Massachusetts, and New Hampshire, there to be sold at high prices. If, now, to the excess of toll, the farmer add the difference between low prices and high ones, he will obtain a sum of fifty dollars per acre as the transit duty imposed upon him by a company to which he has granted a monopoly of the roads of the State, with a view to enable him to avoid the payment of a tax of about one cent per acre."

If the following intimation is correct—which we are unwilling to credit to its full extent—it would of itself be ample cause for the granting of other lines of road.

"The company runs a morning train for passen-

gers. Three years since, as I am informed, a farmer of this vicinity, seeing no other mode of getting his peaches rapidly to Boston, applied for permission to send them by that train. The answer was, that 'it carried no freight.' He waited on the railroad kings themselves, and then, as a special favor, obtained permission to send twelve baskets per day, subject to the enormous charge of forty cents each, or more than one cent per pound. Travelling north, shortly afterwards, and arriving in the neighborhood of the orchards said to belong to the railroad kings themselves, he there saw, as the story goes, whole car loads of peaches, carefully packed and addressed to Boston, attached to the train that he had been assured carried no freight! From that day to this, as the story further goes, such has been the course of proceeding. He has sent twelve baskets per day, and they have sent car loads; perhaps even trains of cars, laden with fine ripe peaches, the produce of their own orchards."

The writer says, "the annual loss to the State from interferences with the peach trade alone, is a million of dollars, and I am well satisfied that even that estimate is far short of the mark.

"I would now ask the farmer what would be his course, if the difficulties which I have described resulted from a law of New York, by which a tax of 30, 40, or 50 cents was imposed upon his peaches? Would he not talk it over with his neighbors? Would he not urge the holding of township meetings? Would he not urge county meetings, and State meetings? Would not he and his neighbors pledge their lives, their fortunes, and their sacred honor, to resist unto the death such gross injustice?

"All these things would they do if the injury came from abroad, but none of these things do they do when it arises under laws that their deputies have pretended to make, and which, being unconstitutional, are utterly invalid and worthless."

"Their forefathers gave their time, their money, and their blood, to prevent the imposition of a tax upon tea that would have been paid by one cent an acre of the State. They sell themselves for a cent an acre, and quietly pay a tax of twenty, thirty, or fifty dollars an acre, for the support of a grasping and rapacious monopoly that holds its existence at their mercy, because they cannot give even a single hour of their time to redeem themselves."

"Let them do as they would do if the oppression came from abroad. Let township call upon township, and county call upon county, for a convention of the State, composed of men determined to be free. Let them but determine that they will be free, and the work will then be done."

At the commencement of his eighth letter he says:

"Before entering upon the examination of the main subject of this letter, I desire to call your attention to an extraordinary and important fact, to wit: that in the month of February, in the year of our Lord one thousand eight hundred and forty-eight, the cheapest mode of transporting goods from Philadelphia to Burlington has been by wagon, on a bad road which runs side by side with a railroad, and has for much of the distance full in view a fine river free from ice, upon which steamboats might have run had the great monopoly permitted. The farmer will do well to calculate the extra cost of his sugar and coffee, because of the existence of a monopoly which thus compels men to use wagons instead of railroad cars, and see if he does not pay, on them alone, as much as his share of the transit duty.

"The 18th section of the charter of the railroad company authorizes the collection of tolls, provided, however, that there shall not be charged per ton more than eight cents per mile, for the transportation of every species of property." This is perfectly clear and explicit, and there is nowhere given any authority to demand or receive more than the rate here limited. The charter was granted on this and other conditions. On these conditions it was accepted by the company. If the compact has been violated, the State may, at any moment, on proof of the fact, declare the charter itself null and void, and from that hour cease the power to collect tolls. Canal and railroads then become public property, and free for use by any and every set of men that may think proper to travel, or to transport produce or merchandise upon them.

"The distance of Burlington from New York is

seventy-five miles. At eight cents per mile, a ton would be six dollars, which gives almost precisely one quarter of a cent per pound as the toll that may be charged on every species of property. This, too, is the highest limit, and it is fixed high with a view to cover the most valuable species of merchandise. It is far higher than is required for commodities of inferior value, as may be seen by a comparison with the tolls of the Erie railroad, which are but one-eighth of a cent on market produce.

"A basket of peas weighs about thirty pounds. At the legal rate, this would give eight cents as the rate of toll. The company charges twenty, being two and a half times the legal rate.

"A basket of peaches weighs thirty-eight pounds. This would give ten cents. The company sometimes charges twenty, being twice the legal rate. At other times it charges forty, being four times that rate.

"A hundred pounds of pork pays thirty-five cents, or almost forty per cent. more than the legal rate. A hundred pounds of poultry pays forty cents, or sixty per cent. above the legal rate. A hundred pounds of groceries pays fifty cents, or almost double the legal rate.

"Garden vegetables generally will average forty pounds, which will give about ten cents per basket. The company charges twenty, being double the legal rate."

"It thus appears that the charges by means of which the fruit of the State has been shut out from the northern markets, have been entirely illegal, and therefore fraudulent; that those by which the produce of the gardens of Burlington and Gloucester has been driven into the markets of Philadelphia, there to be sold at low prices, or to rot on the hands of its producers, have been no less so; and that the course of action by which the company has inflicted upon the State loss to the amount of many millions of dollars has been in violation of the provisions of its charter.

"I limit myself now to an examination of the open infractions of the compact. The evasions of it may, I think, be shown to be almost innumerable. The more I examine the proceedings of the company, the more am I disposed to believe that it would be difficult to designate a single possible mode of evasion that has not been practised.

"The monopoly privilege of the company being unconstitutional and invalid, might at any time have been set aside, but the charter, by virtue of which it collects tolls, was, in all its other parts, binding upon the State, provided always that the company complied with the conditions upon which that charter was granted.

"It has not done so. It has violated them habitually, and during a long series of years: and it has done this to the enormous injury of the people of the State. By so doing it has placed it in their power to declare the charter null and void."

He says, "if, however, the people, in view of the fact that there are some few innocent stockholders—some few who, relying upon others, have been innocently involved in these transactions, and have taken no part themselves in these unceasing violations of the conditions of the charter—some few who have not speculated in peach orchards, or Trenton railroad stock—and desirous not to push the innocent with the guilty, should desire to be lenient to all, they might pursue another course. They might declare the charter null and void, and then make a new settlement with the company, requiring them to pay into the treasury a fixed sum equal to the amount now paid: passing, at the same time, a general law for the making of both turnpikes and railroads, and thus extinguishing for ever the monopoly, without interference with the revenues of the State."

"By the adoption of this course, the people would secure for themselves perfect freedom to make roads in every part of the State, leading to or from the great markets of the Union."

There can be little doubt, we imagine, of the truth of the closing remark of the above paragraph. Railroads would be made in almost every direction throughout the State, and the value of lands and property would be immensely enhanced.

He says "New Jersey should be one of the richest States in the Union. Her position is admirable. She has every variety of soil. She has water pow-



ers in vast abundance. She has iron and copper ores. She wants nothing but good roads, and plenty of them, and these she can make more cheaply than any State in the Union; and she would have them made were it not that she is saddled with an unscrupulous monopoly, whose finger is everywhere—whose purse is large—whose accounts are unexamined, and are, as I believe, little likely to bear the scrutiny to which they may yet, perhaps, be subjected. . . . . Wherever it is desired to make a road, there is its finger seen—there are its wire-workers employed. Mount Holly wants a road from Camden. To kill it, a law must be obtained from one from that place to Burlington. Their object attained, their road sleeps the sleep of death. Flemington wants a road. That also is to be killed. Belvidere wants a road. That must be taken to their embrace, to be killed or not, at their pleasure. "New Jersey is poor. New Jersey has few schools. New Jersey has few roads. New Jersey has little influence. If we would know why all these things are, it is necessary only to study her canal and railroad history, and compare it with that of Massachusetts. The one makes a trap for strangers that she may plunder them. The other makes numerous roads, that she may induce them to travel across her territory, and thus contribute to the formation of excellent roads for her own use. The one is an oligarchy. The other is a democracy. In the one the people are poor and uneducated. In the other they are rich and well instructed."

At the commencement of his ninth letter he says: "One step has, at length, been taken. Your legislature have adopted a resolution having for its object the establishment of a line from Camden through New Brunswick, to New York, to run at convenient hours, and to charge but three dollars. Whether the monopoly will, or will not, see fit to do this, remains to be seen. Should they do so, the people of the various parts of the State will be enabled to exchange visits without being compelled to pass through Pennsylvania for the sole purpose of paying one dollar each for the unnecessary use of ten miles of road owned and controlled by the railroad kings, who have there established their great toll-gate for the collection of the dues payable by yourselves for the use of the right of way in your own State."

It appears, however, by an article which we read in the Newark Daily Advertiser, that the company put their own construction upon the resolution of the New Jersey legislature, and run the 1 P.M. train on the Camden and Amboy line all the way, instead of by the way of Trenton and New Brunswick.

**French Railways and the Republic.**

It appears that the French provisional government are disposed to "absorb" all the railways—without even asking the consent of the owners. It might as well absorb all the vineyards—and could as well manage them as the railways—and in taking possession of them, they would do no more injustice to the proprietors, nor any more to violate the laws of morality and justice, than in taking the railways without the consent of the shareholders.

If the government chooses to build all the railways desired hereafter, that is another thing—but it should beware how it gives just cause for the application to itself of the following, which heads *Herald's* editorial on this subject. He says:—

"Whoever is inclined to rob, is seldom nice about the job!"

And we think he is pretty near right.

The following account of a meeting of parties interested in the railways, with M. Garnier Pages, shows the disposition of the government; but they dare not indulge it to the extent indicated here.

They had better attend to their legitimate duties, and leave the companies to manage the railways—they have quite enough to do to fulfil the expectations of the people without meddling with the railways, except to see that the companies perform their duties.

The proceedings were as follows, viz:—

On Wednesday, the 12th of April, M. Garnier Pages, the minister of finance, received a deputation, consisting of nearly sixty directors of the leading French railway companies.

The minister stated that, for various reasons, he thought it not only expedient, but absolutely necessary, that the State should take the railways into its own hands, that they might be more effectually under its control and protection. The chief of these reasons were the depredations which had been committed upon certain lines, the inability of directors to overcome the insubordination and exorbitant claims of the workmen, and the impossibility of certain unfinished lines obtaining sufficient funds for their completion. Under these circumstances, the minister proposed the following plans for the purchase of the railways by the State:—

"First.—The conversion of the shares at the actual price of this day, and payable in money.

"Secondly.—The same, payable in *rentes*, at the same actual price.

"Thirdly.—The conversion of the shares at the price of the half-monthly settlement of 15th of February, payable in *rentes* at the price of the same day.

"Fourthly.—The conversion of the shares into *rentes*, each taken at the average market price during the six months preceding the 15th of February.

"Fifthly.—Examination of the question whether the re-purchase should be on the basis of the amount actually paid up, or on the revenue actually yielded by the railway. This latter basis was obviously impossible in reference to those lines which are still only in course of construction. It was upon these points that he wished to obtain the opinions of the several companies, and he was now ready to give them earnest attention."

M. Mayard, for the Andrezieux, and Ranne, and other southern lines, stated that these reasons did not apply to the companies he represented, and they were also granted in perpetuity.

Count Deny Benoit doubted whether, supposing the terms were accepted, they could be carried out by a general meeting, if there were one dissentient shareholder.

Baron Paul de Richemont said, that the Orleans and Bordeaux was an Anglo-French company, and one-half of the shares held in England, under a solemn contract with the French nation. The English shareholders had no fear of spoliation, but they were fully satisfied to continue to fulfil their engagement towards the French nation, and the public, as they had hitherto done. The reasons of the minister did not apply to this company, and there was a cordial understanding between the directors and the workmen.

M. Leon Faucher expressed similar sentiments on the part of the Paris and Strasburg company.

There was a general disinclination to speak, or be drawn into a discussion, and the North line being called upon by name, the

Baron James Rothschild simply declared that he had no doubt the shareholders in that

line would rather receive their 10 or 11 per cent. dividend from the company than be absorbed by the State.

No one else being disposed to speak in reply to the invitation of the minister, he declared the sitting at an end.

**Direct Railroad from Syracuse to Rochester.**

The following account of the proceedings of a meeting held at Rochester on the 18th of May, are from the Wayne Sentinel of the 24th. It appears from these proceedings, that the people interested are resolved to have a more direct line, than the present by the way of Auburn, Geneva and Canandaigua, to Rochester; and when this line is fairly under way, there will probably be renewed efforts in favor of the road from Rochester to Niagara Falls, thus making rival lines from Syracuse west—one by the falls through Canada, Michigan and Illinois, and the other to Buffalo and Erie, through Ohio, Indiana and Illinois, to St. Louis.

Whether there will be a rival line from Syracuse eastward to the Hudson, is yet a question; but of the construction of a road from Syracuse, south to Binghamton, or to some point in that vicinity, thus opening a communication with the New York and Erie, and the coal region of Pennsylvania, at an early day, we have no doubt. The Wayne Sentinel says:—

The stock subscribers for the organization of a corporation to construct the proposed railroad, met at the Waverly House in the city of Rochester, pursuant to previous notice, on the 18th. Hon. Harvey Baldwin, of Syracuse, on motion of Judge Miller, was called to the chair; and on motion of P. Tucker, Hon. Samuel Miller of Rochester, and Wm. Clarke, Esq., of Lyons, were appointed secretaries.

The number in attendance was about 100—and the interest and confidence manifested in the contemplated work, were such as to augur well for its early completion. Upon this question there was but one opinion; and the proceedings and results of the meeting were throughout harmonious and satisfactory.

The preliminary stock subscriptions reported at the last meeting, were called for, and the 10 per cent. upon the same as required by law, was paid in by the subscribers, to Freeman Clarke, Esq., temporary treasurer.—Eight hundred and twenty-two shares, amounting to \$82,200, were found to be thus taken—all, with a single exception, by gentlemen residing on the route of the proposed road, as stated below, viz:—

At Rochester	.....	\$9,000
At Macedon	.....	4,800
At Palmyra	.....	9,700
At Marion	.....	500
At Newark	.....	2,900
At Lyons	.....	8,500
At Clyde	.....	2,000
At Port Byron	.....	6,500
At Weedsport	.....	500
At Jordan	.....	10,200
At Canton	.....	6,000
At Syracuse	.....	16,000
At Baldwinsville	.....	500
At Troy	.....	5,000
Total	.....	\$82,200

The general railroad law provides for the subscription of \$1,000 to the mile of a proposed road, and the payment thereon of 10 per cent., as a pre-requisite to the organiza-



tion of a company possessing the powers and privileges of a corporation. The length of the road from Syracuse to Rochester, will be less than 80 miles—Mr. Geddes, in his speech, estimates it at 74 miles—so it will be seen that the subscriptions already obtained exceed the required amount some \$8,000. The entire capital stock of the company, as established in their articles of association, is \$1,500,000.

The stockholders proceeded by ballot to the election of a temporary board of thirteen directors, as follows:—John Wilkinson, Orville W. Childs, T. T. Davis, Syracuse; E. A. Baldwin, Baldwinville; J. M. Clure, Jordan; E. P. Ross, Port Byron; Aaron Griswold, Clyde; Daniel Chapman, Lyons; G. W. Cuyler, Palmyra; Freeman Clark, Samuel Miller, E. S. Beach, Rochester; Alanson Douglas, Troy.

The following gentlemen were chosen commissioners to open books of subscription to the capital stock of the company, and perform other duties provided by law, viz:—Thomas W. Olcott, Albany; Alfred Munson, Utica; James R. Lawrence, Syracuse; Oliver H. Palmer, Palmyra; Everard Peck, Rochester.

The articles of association of the corporation, as reported by the committee previously appointed, were then adopted and signed by the several stockholders, to be filed in the office of the secretary of State.

A committee of directors, consisting of Messrs. Wilkinson, Childs, and Davis, of Syracuse, were appointed to report by-laws for the government of the company, at the next meeting of the directors.

The directors are to meet at Lyons on Tuesday, the 6th of June next, for the purpose of a formal organization of their board, by the choice of a president and engineer, and to take any action in regard to the business of the company that may be deemed proper.

The books for subscriptions to the capital stock will be immediately opened by the commissioners, giving to all who desire to make an investment, an opportunity of doing so. With the amount already paid in, the surveys, plans, etc., can be carried forward, as soon as the engineer shall be appointed.

#### Present State of Railway Property in England, and a Hint to Government.

The following views of the editor of Herapath's Railway Journal, on the present—1st April, 1848,—aspect of affairs in Europe, and their influence upon railway property in Great Britain, may be of interest to some of our readers. He says:—

We have never claimed to be infallible, though we think we may lay claim to have been found much oftener right than wrong. The reason is very simple. We collect all the best facts we can, and from a careful mixing and sifting of them, endeavor to elicit causes which shall indicate the future current of affairs. For, unless where such extraordinary things pop in as the French revolution to disturb the even rolling out of effects from causes, we are inclined to believe that a pretty sure guess may be made of the future from the present without much preten-

sion to the gift of prophecy. That is, indeed, the whole secret of our former pre-science. Upon that we form our present belief of prediction, if the reader like it better, that the funds and railway property will ere long take a turn upwards. For if we look at the vast quantity of money already accumulated in our bank of England, and the unsettled state of the continental nations, we cannot help thinking that we may yet have a greater influx of money. People will send their money and property to that country, be it England or not, where they are most likely to be safe. We have proof of this, as mentioned by us a fortnight ago in our city article, in the numerous and daily arrivals of goods from France, which are consigned to all sorts of persons, rather than allow them to remain in so unsettled a country. It is the same with the money. No man considers himself safe in France with money, or that which may be easily converted into money's worth. Similar may be said of the other States, notwithstanding their present apparently peaceable position. Hence, while we continue quiet in this country, and at peace with other countries, we think we may fairly look forward to an accumulation of money in England. The consequence will, we think, be numerous and large money purchases into the funds, and a gradual rise, with, however, some checks and fluctuations.

We take this view upon the supposition that England has the prudent and resolute to remain at peace, and that our rulers have the firmness to keep clear of dangerous treaties, except treaties of peace, with continental powers. We do not consider whether the continental powers go to war or not. Tho' it may affect us at first, yet as soon as it is clearly seen that we are not to be embroiled, their quarrels would rather tend to benefit than to injure us.

Should the funds rise, the railways will naturally go up with them, if not in so rapid a degree, at least in some degree. For men will begin to look about them for better interest, as soon as the funds reach a certain point, and the calmness of our affairs restores a little confidence. It is, therefore, of the utmost importance to us to be quiet and contented with our lot. Nothing, indeed, but injudicious measures on the part of the minister, in straining the cord of taxation too tightly, can disturb us. We may have a few disturbances, or attempts at them; but England, as a nation, is not disposed to try wild republican principles.

What particular classes of shares will be most benefited is difficult to say. Probably lines in actual operation, where the calls are concluded, and something of the dividend is known, will first feel, and it may be, most feel the advantage. In these unsettled times, men hardly like to have liabilities impending over them.

Provided France continue her present placid condition, and find the necessary oil to lubricate the State machinery and keep it in motion, it is not at all unlikely but French shares, which are awfully depressed, may take a considerable start upwards.

What we have here said relates to the next four or five months only, and not to any very distant period. We are of opinion, with many others, that France cannot long continue under her present form of government, though her rulers are doing, and will, no doubt, do all in their power to preserve order and respect property. She is too far advanced in civilization to be long governed as a republic. We, therefore, at no distant day, look forward to some new convulsion in that country.

Moreover, the dissatisfaction spreading into other countries, and the large armed forces kept up by Russia and Austria, render it probable that an outbreak of some kind may take place, and involve the European countries in war. That may not happen yet; but we should not like to take the odds for peace for twelve months, or perhaps for six. Should the French revolution, contrary to the expectation of all thinking men, work well, the natural love of change may prompt other countries to follow the perilous example, which would immediately kindle an extensive, if not a general war. In this country we hope and believe there is good sense enough in the great body of the people to keep out of any such experiments, which both ancient and modern history shows, have ended in military despotism, ruinous to commerce, and ten times worse for the people than any legitimate monarchy.

Our railways will doubtless be influenced, more or less, by the kind of harvest we may have. If it be a fine one, and well got in, it will help to raise the value of railway property, and the contrary, if it be a backward and wet harvest. We do not profess to be weather-wise; but, judging from the springs and summers of a few past years, and the present season, so far as it has advanced, a moist summer is not unlikely. However, there is so much excellent corn from last year as to leave no apprehensions of a scarcity. We, therefore, do not think that the harvest will have any material prejudice on railways; though, if it turn out a good one, and is well saved, it may considerably aid their market price.

Calmly looking over the present position of affairs, we expect an improvement in the funds, and in railway property, for the next five or six months. Our reasons for it we give, and our readers must weigh and judge of their value themselves. With regard to railways, we might add to our reasons for an expected advance, the very disproportionably low rates at which they stand.

If anything, the next winter is that to be dreaded. During the summer there will be little difficulty in procuring work; but when the winter comes on it will be another affair. There is, however, happily within our reach, the means of finding employment for large numbers of men on works of great reproductive value. We allude, of course, to the railways. Thank God we are not obliged to see our laborers starving for the want of work, or to maintain them in idleness at the expense of the industrious. The railways, as discussed in our last, afford an ample



field for employment, if our rulers will design to cultivate it. There is no necessity for the State to spend its money, but simply to lend its credit—or offer to lend it, which, doubtless, would effect the same object—for a short period. If this be done, it will not simply give employment to many thousands of hands, and aid these great works now lying idle, by bringing them into earlier profitable operation, but it will raise the price of railway property, and enable the weak holder to get out of what he cannot go on with, or sell, except at a ruinous loss.

Much, therefore, will depend on the prudence of ministers, in keeping our country internally quiet. Happily, railways furnish the means of doing so without expense, and if the opportunity is not embraced, we shall deeply lament it. We should like to see the government turn its attention to this subject at once, and not wait to be driven into it by circumstances. The weather in the winter may prevent employment. If men, therefore, can provide in sunshine for a rainy day, it would be all the better; and it would be wise to encourage and assist them to do so.

#### Resistance to Railway Trains.

Mr. D. Gooch, of the Great Western railway, England, read before the Institution of Civil Engineers on the 18th April, a paper on the "resistance to railway trains at different velocities." Although the paper is not given in full, yet the following synopsis will, we think, be interesting to our readers, therefore we give it, and shall, hereafter, if we can obtain the article entire, give it a place in the Journal, as we believe we have much yet to learn on this subject, not only in this country, but also in England.

**Institution of Civil Engineers.**—April 18. —**General Meeting.**—Mr. J. Field, President, in the chair.—The paper of the evening was a series of "observations on the resistance to railway trains at different velocities," by Mr. D. Gooch, of the Great Western. For the purpose of performing the experiments, a dynamometer carriage was constructed at Swindon, in which all the results required were registered upon a large scale, on the same roll of paper, thus exhibiting at one view, and in the same period of time, the tractive power exerted upon the train, and the force and direction of the wind; the registration of the results was made upon the paper at every sixteenth part of a mile, and the time was registered in correspondence with the distance traversed during every fifth part of a second. The dynamometer spring used was 7 feet 6 inches long, and very carefully arranged. It was only necessary to count the number of seconds, or fractions of a second, in one or more of the distance divisions, and the speed was accurately ascertained. The force and direction of the wind was ascertained by a wind gauge, placed 5 feet above the top of the carriage, with the connections brought down to pencils which indicated on the same sheet all the results. Indicator cards were also taken simultaneously from the steam cylinders as frequently as was practicable, but not continuously, as it was a service of some danger, the experimenter being obliged to sit on the buffer-

beam of the engine at a velocity of 60 miles per hour, and in that windy position to take off four sets of cards in three quarters of a minute. The spot selected for performing the experiments was one mile of railway perfectly straight and level, and nearly on the surface of the ground; and in the plan the height of the trees, hedges, and every intervening object which could affect the influence of the wind is clearly marked. The experimental train consisted of first and second class carriages, each on six wheels, 4 feet diameter, taken indiscriminately from the working stock, and loaded with iron to represent a fair load of passengers, giving a gross weight for each of ten tons. The experiments were tried with various weights and speeds up to 100 tons, and to 62 miles per hour, and the results were classified and arranged in a tabular form, with copious explanatory headings, so as to render reference to them exceedingly easy. The author first reviewed the deductions of Mr. Wyndham Harding's formula, which was given at the discussion at the institute in 1846, and gave his reasons for dissenting from that formula. He then examined critically several experiments recorded in the tables, stating candidly all the exceptions that could be taken to them; showing that although there was a difference of as much as 52 per cent. shown between the resistance as calculated by Mr. Harding's formula and the experiments made by Mr. Gooch, that difference might be accounted for by the methods employed by Mr. Harding, which were objected to, as calculated to produce erroneous results, viz: allowing carriages to run down inclines by their own gravity, using wheels of 3 feet diameter instead of 4 feet, having a much greater length of train for the wind to act upon, etc. He reviewed the great effect of a side wind against a train—driving the flanges of the wheels against the rails; and argued that the length of a train of carriages was much more important than its own weight. The author did not offer any formula that should be applicable for calculating the resistance of all railway trains; but his tables gave examples of almost every case that could occur, and thence data could be supplied for those who wished to carry the investigation further, and make a formula for themselves. He arrived at the conclusion that in practice the friction of the axle journals was not a constant quantity at all speeds, and thought that the number and diameter of the wheels in a train, in proportion to the weight, should form elements in any general formula. He showed by experiments that the total atmospheric resistance to a train weighing 50 tons differed but slightly from that to a train of 100 tons weight, if the carriages were small, and the train long in the one case, and the reverse in the other case. The general result of the diagram of resistance with trains of 100 tons, and with 50 tons, showed that the resistance calculated by the narrow gauge formula with a 50 ton train, at 62½ miles per hour, was 37 pound; with a train of 100 tons, by the same formula, at 61 miles, it was 31½ pounds. The broad gauge resist-

ance, with a train weighing 50 tons, at 62½ miles per hour, was under 23 pounds; and with a train weighing 100 tons, at 61½ miles per hour, was 22½ pounds. We cannot, of course, give fully the results, except in a comprehensive form, but such were the general results. The author concluded his paper by saying that it appeared to him necessary, before any general formula for calculating the resistance to railway trains could be made, that the value of the following elements, necessary in such formula, should be determined by experiments:—1. The axle journal friction, at different velocities and at different weights, per square inch of journal surface. 2. The resistance to the rotation of the wheels and axles per pair, at different velocities and with different diameters. 3. The resistance due to the rolling of the wheels upon the rails, with different weights upon them, and with different diameters. 4. The resistance due to the passage of the train through the atmosphere, at different velocities, with different proportions of weight, and length and breadth of train. 5. The resistance due to oscillation or unsteady motion of the train, at various speeds. The author considers that all these values might be determined with a considerable degree of accuracy, by careful experiment.

#### On the Strength of Materials.

Mr. Buchanan, president of the "Scottish Society of Arts," read before the society, at their general meeting on the 20th of February, the following paper "on the strength of materials, particularly cast iron, and malleable iron, and their application in the construction of railway bridges. He says:

"Although many of the facts have been previously presented to our readers, the whole paper is one of so highly interesting a character that we present it in its complete shape. The subject was illustrated by various experiments and models, more particularly a large model, with drawings and elevations of the high level bridge across the Tyne at Newcastle, which, through the liberality of Mr. R. Stevenson, the engineer of the bridge, Mr. Buchanan was enabled to exhibit, and explain the situation, extent and construction of this great work in all its details. The Scottish Railway Gazette thus sets forth the proceedings.

"Mr. Buchanan said he did not profess to communicate anything new or original, but would be happy if he could only draw from the stores of information which had of late years been accumulating on this subject, under the hands of very eminent scientific and practical men, such leading facts and maxims as might prove a sure guide for practice.—The various strains might all be reduced to two kinds, according as the material is either distended or compressed by any force or pressure. From these two all others arise, and either consist or are compounded of them.—The tensile strain is the simplest of all, depending neither on the peculiar form of the materials, nor even on the length, but only on the single element, viz: the section of fracture. This peculiarity of the tensile force was explained and illustrated. In regard to cast iron, the result of the extensive and inte-



testing experiments of Messrs. Hodgkinson and Fairbairn was given, and it was found from the mean of 16 different trials of English, Welsh and Scotch iron, both hot and cold blast, that this material will sustain about 7½ tons per square inch before breaking, the weakest specimen being 6 and strongest 9½. The limit of fracture, however, can never be approached with safety, nor even within a long distance, seeing that this material is liable to unseen imperfections, and above all, to snap in a moment without distending itself, or giving any warning of danger.

Malleable iron, again, is much superior in tensile strength, and, by its remarkable ductility, inspires confidence in a still higher degree. It bears no less, at an average, by various experiments from Telford and Brown, than 27 tons—the weakest 24, and the strongest 29 tons; but before the half of this load is applied, it begins to stretch, and continues stretching up to the limit of fracture. It is therefore not only three times stronger than cast iron, but may be safely loaded with five times the breaking weight, or about eight or nine tons. In regard to the strength of compression, this depends also, as long as the length is limited, on the same element—the section of fractures; but when a long rod or slender pillar is loaded or compressed, it is liable to bend, not for want of strength, but for want of stability, the least flexure turning it off its centre, and breaking it off by lateral force, deranging entirely the simple law applicable to short lengths.

"In regard to cast iron, by far the most satisfactory experiments are those by Hodgkinson and Fairbairn. The mean result gives very nearly 50 tons on the square inch—the weakest 36½ tons, and the strongest 60 tons. It is thus six times stronger in compression than in distension, and hence it is peculiarly recommended for sustaining any superincumbent weight, as in the case of pillars and of bridges, provided the construction is such as to resolve the strain arising from the load into a longitudinal compression. This is often in our power by proper arrangements chiefly giving a sufficient height and curvature to the arch; but in cases where, for the want of head room, the arch is unduly flattened or resolved into a straight beam or girder, the danger is that we bring the tensile force into play, and then the use of cast iron is objectionable, or at least requires extreme caution. No direct experiments have been made on malleable iron of short lengths, but from some facts brought out by Mr. Hodgkinson, its strength appears much inferior to cast iron chiefly from ductility, whereby it gives way much sooner under a load. It will bear 27 tons, probably much more, without fracture; but with 12 tons it yields to the load, contracts longitudinally, and swells out laterally; and this is another very important fact for our guidance in the use of those different materials. In regard to stone, experiments have been made on specimens rather too minute. Like cast iron, the crushing strength is superior to the tensile, and hence its adaptation for buildings, particularly bridges. Craig-

leith stone will bear 2½ tons on the inch, or upwards of 400 tons on the square foot; Aberdeen granite 600 tons. In regard to bricks, he had occasion to make experiments in relation to the great chimney of the Edinburgh gas works. It became matter of consideration whether the ordinary brick could withstand the pressure of so lofty a column. Trials were therefore made with a powerful hydraulic press, not on small specimens, but on the actual brick. The ordinary stock brick was found to bear 140 tons on the square foot, and the common fire brick 157 tons; but the brick of which the chimney is constructed, consisting of a mixture of fire clay and iron stone, bore, a single brick on its bed, no less than 140 tons, equal to 400 tons on the square foot. The effect of the transverse strain was then considered and illustrated by various experiments and models. The strain is a compound of the tensile and compressive strain, the one part of a beam loaded in the middle being compressed and the other distended, and the beam itself becoming a lever, and acting often with enormous power against its own strength. Hence it became easy to calculate the strength, this being in every case proportional in the first instance to the area of the section of fracture, and this original element modified by the length and depth of the beam, diminishing in exact proportion to the length, and increasing in proportion to the depth. The transverse strain acting with such severe advantage against our materials, various methods have been contrived for eluding its effects, and for these none is more remarkable than the principle of the arch, the effect of which was illustrated by experiments and particularly the necessity in flat arches of having secure abutments to resist the horizontal thrust, and this was frequently accomplished where there is sufficient head room, by uniting the extremities of the arch by strong malleable iron rods, in the same manner as, in the case of the roof, the feet of the rafters are united and prevented from spreading by the tie beams; and this is the principle, the securest of all, on which the great iron bridge at Newcastle, now in progress, is constructed, the object of which is to cross the river and valley of the Tyne, on the highest level of the railways on each side, so as to unite them in an untruncated line from London to Berwick, and unite the termini of the different railways, now separated three quarters of a mile or more, into one grand central station, a little to the west of the ancient castle.

"The distance between the station and the present terminus of the York and Newcastle is 3,457 feet, consisting chiefly of the space occupied by the bed of the river Tyne, and the steep bank on each side, well known to travellers in descending from Gateshead Fell on the south, and Dean street on the north, both to be now superseded by the smooth and level surface of the railway, and by a turnpike road running on the same bridge directly under the line of rails. The steep banks on each side are spanned by stone arches of a very substantial character, the river and low banks by six metallic arches, all of the same

dimensions and structure, resting on solid piers and lofty columns of masonry. In the bed of the river the piers are laid on very solid foundations of piles planking, with concrete, many of the piles 40 feet in length, and driven to this depth through hard gravel and sand till they reach a bed of freestone rock. Nasmyth's celebrated pile driver is in full operation here, and with wonderful effect, and has come most opportunely in aid of the work—driving night and day, at the rate of 60 or 70 strokes a minute, the pile heads being often set on fire by the rapidity and violence of the blows of the ram. Piers laid 2 feet below low water mark, and raised about 100 feet to the springing of the arches. The arches consist each of four main ribs of cast iron, each in five segments, bolted together, and forming one entire arch 125 feet span, and rising 17 feet 6 inches in the centre, and the level of the rails on the upper platform 108½ feet above the level of high water mark of the Tyne. Depth of the rib 3 feet 9 in. at the springing, and 3 feet 6 in. at the crown, with flanges 12 inches broad, external ribs 2 in. thickness of metal; internal ribs 3 inches. Total sectional area at the crown 644 square inches, which would bear with safety a load of 5, or 6,000 tons, and would form, with proper abutments, a strong arch in itself; but for the fullest security, and to prevent the possibility of inconveniences of risk from deflection or vibration, or otherwise, each rib is united at the springing by strong malleable iron bars or ties, 7 in. broad and 1 in. deep, of the best scrap iron, and in all 24 in number. The railway is supported above the arch, and the roadway suspended from beneath, by hollow cast iron pillars, 10 feet apart, and each 14 inches square, through which are passed strong malleable iron circular bars, binding the whole into one stiff and solid mass.

"The sectional area of the horizontal bars is 168 square inches, which would sustain upwards of 4,000 tons without breaking, and 1,500 tons with perfect safety, but the whole weight of the bridge will not exceed 700 tons, leaving 800 tons of surplus strength. The railway, which is at the summit level, runs on a level of 4 feet above the crown of the arched rib, and is supported in the middle by hollow cast iron trough girders resting on the top of the pillars, 10 feet apart, and united by longitudinal timbers laid with strong planking. The roadway runs nearly on a level with the malleable iron ties, leaving a space of about 20 feet clear head room. In the whole of the work the utmost pains have been bestowed on materials and workmanship, and in making everything complete, the surfaces, which abut together, being regularly planed, or turned, as in machinery; and from all the arrangements the most successful results may be anticipated from this bridge. The cost of the iron work and roadway, by the estimates, comes to £112,000, and the contracts for the bridge and viaducts to something above £300,000."

**RAILROAD IRON—500 TONS HEAVY**  
Pattern—to arrive. For sale by  
**DAVIS BROOKS & CO.**  
June 3, 1850. 68 Broad street, New York.



## TO CONTRACTORS FOR MASONRY.

**PROPOSALS**, under seal and suitably endorsed will be received by the undersigned up to **SATURDAY**, the 10th of June, proximo, inclusive, for the construction of two large stone viaducts upon the Washington Branch of the Baltimore and Ohio Railroad over the Little Patuxent river near the Savage factory and Northwest Branch at Bladensburg.

These viaducts will be heavy structures, well worthy the attention of Contractors of the first capacity for this kind of work, who are therefore invited to examine them. The plan of the Bridges may be seen at the Company's office, No. 23 Hanover street Baltimore, where full information will be given by C. P. Manning, Master of Road.

Unexceptionable recommendations must accompany the proposals.

By order of the President and Directors,

BENJ. H. LATROBE, Chief Eng.

Engineer's Office, Baltimore & Ohio R. R.  
223 Baltimore, May 15th, 1848.

## PENNSYLVANIA RAILROAD COMPANY.

Notice is hereby given that the **FOURTH INSTALMENT OF FIVE DOLLARS** per share on the Capital Stock of this Company, is required to be paid on or before the 1st day of July next. The **FIFTH INSTALMENT OF FIVE DOLLARS** per share, on or before the 1st day of September, and the **SIXTH INSTALMENT OF FIVE DOLLARS** per share on or before the 1st day of November next, at the office, No. 70 WALNUT Street.

Payments will be received of one or more instalments, or the Stock may be paid in full at the option of the stockholders, and interest will be allowed from date of payment.

Instalments not paid punctually will be subject to the penalty of one per cent. per month, as required by law.

GEORGE V. BACON,

May 13-81

Treasurer.

## NEW PATENT CAR WHEELS.

**THE SUBSCRIBERS ARE NOW MANUFACTURING** Metallic Plate Wheels of their invention, which are pronounced by those that have used them, a superior article, and the demand for them has met the most sanguine expectations of the inventors. Being made of a superior quality of Charcoal Iron, they are warranted equal to any manufacture.

We would refer Railroad Companies and others to the following roads that have them in use. Hartford and New Haven, Connecticut River Railroad, Housatonic, Harlem, Farmington, and Stonington.

SIZER & CO.

January 29, 1848, if

Springfield, Mass.

## THE SUBSCRIBERS ARE PREPARED TO

execute orders at their Phoenix Works for Railroad iron of any required pattern, equal in quality and finish to the best imported.

REEVES, BUCK & CO.,

Philadelphia.

ROBERT NICHOLS, Agent,

1848

No. 79 Water St., New York.

## DIRECT ACTION ENGINES

## FOR STEAMBOATS.

## THE PATENT DOUBLE CYLINDERS.

AND ALSO

## THE ANNULAR RING PISTON ENGINES,

of Messrs. Maule, Sons & Field, of London, may be built in the United States, under license, which can be obtained of their agent,

THOMAS PROSSER, C. E.,

28 Platt street, New York.

May 6, 1848.

## LOCOMOTIVE AND MARINE EN-

gine Boiler Builders. Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues, suitable for Locomotives, Marine and other Steam Engine Boilers, from 3 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; Hollow Pistons for Pumps of Steam Engines, etc. Manufactured and for sale by

MORRIS TASKER & MORRIS,

Warhouse S. E. corner 3d and Walnut Sts., Philadelphia.

## FULLER'S PATENT INDIA RUBBER

Railroad Springs.—These Springs are composed of alternate layers of India Rubber rings and Metallic plates, and are superior to those made of steel, for the following among other reasons:—

*First*—On account of their extreme simplicity, and the impossibility of their being broken or damaged.

*Second*—Their lightness: the elastic material not being more than one-tenth of the weight of steel springs of similar strength, thereby saving many tons of dead weight in a long passenger train—a matter of great economy in working railroads.

*Third*—The facility with which the power of these springs may be regulated: first, by increasing or diminishing the diameter of the ring, and next, by increasing or diminishing the number of the rings in each Spring.

*Fourth*—It is a particularly good material for Buffers; because, when first pressed, they are much more elastic, and more easily acted on than steel; whilst the power of resistance, after yielding to a certain extent, increases in such a ratio as to prevent the possibility of the Buffer-head being brought to a dead hard stop. And from this arrangement, the most valuable results may be anticipated in cases of collision.

*Fifth*—The easy motion given to the cars and engines which are fitted with these Springs—there being none of that jarring or vibratory motion so apparent with steel springs; and consequently there is a great saving of wear and tear, both to the cars and the permanent way. The recoil of a steel spring is frequently more harsh than the actual giving of the spring in the first instance, and this recoil is altogether obviated by India Rubber Springs.

*Sixth*—The cost of India Rubber Springs will be found less than those of steel, and they are calculated to last very much longer.

These Springs and Buffers have now been tried for upwards of three years, under very able superintendence, and with the most decided success. They are in general use upon the principal lines in England and Scotland, (among which may be mentioned the Great Western, the Midland, the London and North-Western, the Eastern Counties, London and Brighton, London and Dover, North Staffordshire, and Caledonian Companies.) They are also used in other parts of Europe. The patentee, therefore, feels justified in stating that he is prepared to furnish not only a more efficient Spring and Buffer than any hitherto in use, but a more durable one, and upon terms which will effect a considerable saving to Companies.

The most satisfactory trials have been made as to the non-liability of this material being affected by extremes of cold or heat; nor will any amount of pressure permanently alter its shape or structure. The patentee therefore submits the invention to the public, with the confident anticipation of its successful and general adoption.

The patent for this invention was granted to Mr. W. C. FULLER, in October, 1846, and the same gentleman has patents for it in England and other countries in Europe. The sole Agent in the United States is Mr. G. M. KNEVITT, who will show models and drawings of the various modes of application to passenger cars, engines, tenders, wagons, etc., and give further particulars as to its satisfactory working; and is prepared to supply the Springs in any quantity, or to grant licenses for manufacturing them.

Principal Office, 78 Broad Street, New York.

And a Branch Office at Messrs JAMES LEE & CO.'S, 18 India Wharf, Boston.

## CHILLED RAILROAD WHEELS.—THE

undersigned, the Original Inventor of the Plate Wheel with solid hub, is prepared to execute all orders for the same, promptly and faithfully, and solicits a share of the patronage for those kind of wheels which are now so much preferred, and which he originally produced after a large expenditure of time and money.

A. TIERS,

Point Pleasant Foundry,

He also offers to furnish Rolling Mill Castings, and other Mill Gearing, with promptness, having, he believes, the largest stock of such patterns to be found in the country.

Kensington, Philadelphia Co.,

March 12, 1848.

## FAIRBANKS' RAILROAD SCALES.

**THE** Subscribers are prepared to construct at short notice, Railroad and Depot Scales, of any desired length and capacity. Their long experience as manufacturers—their improvements in the construction of the various modifications, having reference to strength, durability, retention of adjustment, accuracy of weight and despatch in weighing—and the long and severe tests to which their scales have been subjected—combine to ensure for these scales the universal confidence of the public.

No other scales are so extensively used upon Railroads, either in the United States or Great Britain; and the manufacturers refer with confidence to the following in the United States.

Eastern Railroad,	Boston and Maine R. R.
Providence Railroad,	Providence & Wor. R.R.
Western Railroad,	Concord R. R.
Old Colony Railroad,	Fitchburg R. R.
Schenectady Railroad,	Syracuse and Utica R. R.
Baltimore & Ohio Road,	Baltimore & Susq. R. R.
Phil. & Reading Road,	Schuylkill Valley R. R.
Central (Ga.) Railroad,	Macon and Western R.R.
	New York and Erie Railroad;

and other principal Railroads in the Western, Middle and Southern States.

E. & F. FAIRBANKS & CO.

St. Johnsbury, Vt.

Agents { FAIRBANKS & Co., 81 Water st. N. York.

{ A. B. NORMAN, 196 Market st. Philad.

April 22, 1848.

1p-17

## WILLIAM JESSOP &amp; SONS,

## CELEBRATED CAST-STEEL.

The subscribers have on hand, and are constantly receiving, from their manufactory

## PARK WORKS, SHEFFIELD.

Double Refined Cast Steel—Square, flat & octagon.

Best warranted Cast Steel—Square, flat & octagon.

Best Double and Single Shear Steel—Warranted.

Machinery Steel—Round.

Best and 2d gr. Sheet Steel—for Saws and other purposes.

German Steel—flat and sq. "W. L. & S." "Eagle"

and "Goat" Stamps.

Genuine "Sykes," L Blister Steel.

Best English Blister Steel, etc., etc.

All of which are offered for sale on the most favorable terms, by

WM. JESSOP & SONS,

91 John Street, New York.

Also by their Agents—

Curtis & Hand, 47 Commerce St., Philadelphia.

Alexr Fullerton, & Co., 119 Milk St., Boston.

Stickney & Beatty, South Charles St., Baltimore.

May 6, 1848.

## MATTEWAN MACHINE WORKS.

## THE MATTEWAN COMPANY HAVE

added to their Machine Works, an extensive Locomotive Engine department, and are prepared to execute orders for Locomotive Engines of every size and pattern—also, Tenders, Wheels, Axles, and other Railroad Machinery, to which they ask the attention of those who wish such articles, before they purchase elsewhere.

## STATIONARY ENGINES, BOILERS, ETC.

Of any required size or pattern, arranged for driving Cotton, Woollen, or other Mills, can be had on favorable terms, and at short notice.

## COTTON AND WOOLLEN MACHINERY,

Of every description, embodying all the modern improvements, second in quality to none in this or any other country, made to order.

## MILL GEARING,

Of every description, may be had at short notice, as this company has probably the most extensive assortment of patterns in this line, in any section of the country, and are constantly adding to them.

## TOOLS.

Turning Lathes, Slabbing, Planing, Cutting, and Drilling Machines, of the most approved patterns, together with all other tools required in machine shops, may be had at the Mattewan Company's Shops, Fishkill Landing, or at

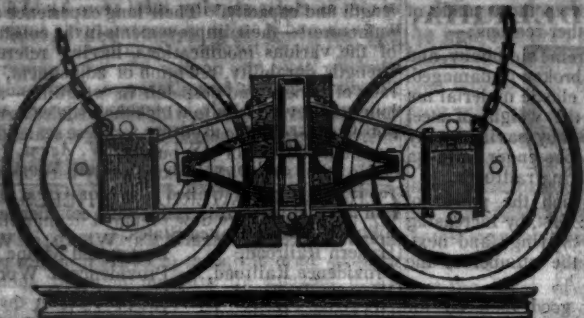
39 Pine Street, New York.

WM. B. LEONARD, Agent.



**RAY'S EQUALIZING RAILWAY TRUCK.—THE SUBSCRIBER**

has recently formed a business connection in the City of New



York, expressly for the manufacture of the newly patented and highly approved Railroad Truck of Mr. Fowler M. Ray, is ready to receive orders for building the same, from Railroad Companies and Car Builders in the United States, and elsewhere.

The above Truck has now been in use from one to two years on several roads a sufficient length of time to test its durability, and other good qualities, and to satisfy those who have used it, as may be seen by reference to the certificates which follow this notice.

There have been several improvements lately introduced upon the Truck, such as additional springs in the bolster of passenger cars, making them delightful riding cars—adapting it to tenders, trucks forward of the locomotive, and freight cars, which, with its original good qualities, make it in all respects the most desirable truck now offered to the public.

Orders for the above, will, for the present, be executed at the New York Screw Mill, corner 33d street and 3d avenue, (late P. Cooper's rolling mills) and at the Steam Engine Shop of T. F. Secor & Co., foot of 9th street, East

river, (of which firm the subscriber was late a partner) under the immediate supervision of Mr. Ray himself.

Several sets of trucks containing the latest improvements have recently been turned out for the New York and Erie railroad, and the New Jersey Transportation company, which may be seen upon said roads.

The patronage of Railroad Companies and Car Builders is respectfully solicited.

New York, May 4, 1846.

W. H. CALKINS, and Others.

To all whom it may concern:—This is to certify that the New Haven, Hartford and Springfield railroad co., have had in use six sets of F. M. Ray's patent trucks for the last 20 months, during which time it appears to me, they have proved to be the best and most economical truck now in use.

[Signed.]

WILLIAM ROE, Sup't of Power.

I certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Philadelphia and Reading railroad for some time past, under a passenger car.

For simplicity of construction, economy in cost, lightness of material, and extreme ease of motion, I consider it the best truck we have ever used. Its peculiar make also renders it less liable to be thrown off the track, when passing over any obstruction. We intend using it extensively under the passenger and freight cars of the above road.

Reading, Pa., October 6, 1845.

[Signed.] G. A. NICOLL.

Sup't Transportation, etc., Philadelphia and Reading Railroad.

To all whom it may concern:—This is to certify that the N. Jersey Railroad and Transportation company have used Fowler M. Ray's Truck for the last seven months, during which time it has operated to our entire satisfaction. I have no hesitation in saying that it is the simplest and most economical truck now in use.

[Signed.]

T. L. SMITH,

Jersey City, November 4, 1845.

N. Jersey Railroad and Transp. Co.

This is to certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Long Island railroad for the last year, under a freight car. For simplicity of construction, economy in cost, lightness of material and ease of motion, I consider it equal to any truck we have in use.

Long Island Railroad Depot,

[Signed.] JOHN LEACH,

Jamaica November 12, 1845.

Sup't Motive Power.

**TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.**

**PASCAL IRON WORKS.**

**WELDED WROUGHT IRON TUBES**

From 4 inches to 1 in calibre and 2 to 10 feet long, capable of sustaining pressure from 400 to 2300 lbs. per square inch, with Stop Cocks, T. L., and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER PURPOSES.



Manufactured and for sale by MORRIS, TASKER & MORRIS, Warehouse S. E. Corner of Third & Walnut Streets, PHILADELPHIA.

**MANUFACTURE OF PATENT WIRE**  
Rope and Cables for Inclined Planes, Standing Ship Rigging, Mines, Cranes, Tillers, etc., by JOHN A. ROEBLING, Civil Engineer, Pittsburgh, Pa.

These Ropes are in successful operation on the planes of the Portage Railroad in Pennsylvania, on the Public Slips, on Ferries and in Mines. The first rope put upon Plane No. 3, Portage Railroad, has now run 4 seasons, and is still in good condition.

**NICOLL'S PATENT SAFETY SWITCH**  
for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design. It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee, G. A. NICOLLS, Reading, Pa.

**RAILROAD SCALES.—THE ATTENTION**

of Railroad Companies is particularly requested to Ellicott's Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of 20 years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearers and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT,

Factory, 9th street, near Coates, cor. Melon st. Office, No. 3 North 5th street, Philadelphia, Pa.

**LAP—WELDED WROUGHT IRON TUBES**

**TUBULAR BOILERS,**

FROM 1 1-2 TO 8 INCHES DIAMETER.

These Tubes are of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.

THOMAS PROSSER,

Patentee, 28 Platt street, New York

**LAWRENCE'S ROSENDALE HYDRAULIC CEMENT.** This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Floors and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight paper barrels, by JOHN W. LAWRENCE, 142 Front street, New York.

Orders for the above will be received and promptly attended to at this office.

**TO RAILROAD COMPANIES AND MANUFACTURERS OF RAILROAD MACHINERY.**

The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside.

THOMAS & EDMUND GEORGE, 445 N. E. cor. 12th and Market sts., Philad., Pa.

**THE NEWCASTLE MANUFACTURING**

Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gear of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention.

ANDREW C. GRAY, 445 President of the Newcastle Manuf. Co.

**NORWICH CAR FACTORY, NORWICH, CONNECTICUT.**

At the head of navigation on the River Thames, and on the line of the Norwich and Worcester Railroad, established for the manufacture of

**RAILROAD CARS,**

OF EVERY DESCRIPTION, VIZ: PASSENGER, FREIGHT AND HAND CARS.

**ALSO, VARIOUS KINDS OF ENGINE TENDERS AND SNOW PLOUGHS, TRUCKS, WHEELS & AXLES**

Furnished and fitted at short notice. Orders executed with promptness and despatch.

Any communication addressed to JAMES D. MOWRY,

General Agent, Norwich, Conn.

Will meet with immediate attention.



# NORRIS' LOCOMOTIVE WORKS. PUSHHILL, SCHUYLKILL SIXTH-ST., PHILADELPHIA.



**THE UNDERSIGNED** Manufacture to order Locomotive Steam Engines of any plan or size. Their shops being enlarged, and their arrangements considerably extended to facilitate the speedy execution of work in this branch, they can offer to Railway Companies unusual advantages for prompt delivery of Machinery of superior workmanship and finish.

Connected with the Locomotive business, they are also prepared to furnish, at short notice, Chilled Wheels for Cars of superior quality.

Iron and Brass castings, Axles, etc., fitted up complete with Trucks or otherwise.

NORRIS' BROTHERS.

**MACHINE WORKS OF ROGERS.** Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and despatch.

## Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

## Cotton, Wool and Flax Machinery

of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR, Patterson, N. J., or 60 Wall street, N. York.

**PIG AND BLOOM IRON.**—THE SUBSCRIBERS are agents for the sale of numerous brands of Charcoal and Anthracite Pig Iron, suitable for Machinery, Railroad Wheels, Chains, Hollowware, etc. Also several brands of the best Puddling Iron, Juniata Blooms suitable for Wire, Boiler Plate, Axe Iron, Shovels, etc. The attention of those engaged in the manufacture of Iron is solicited by

A. WRIGHT & NEPHEW,  
Vine St. Wharf, Philadelphia.

**T. & C. WASON, Manufacturers of every style of Freight and Baggage Cars.**—Forty rods east of the depot, Springfield, Mass.

Running parts in sets complete, Wheels, Axles, or any part of cars furnished and fitted up at short notice and in the best manner.

N. B. Particular attention paid to the manufacture of the most improved Freight Cars. We refer to the New Haven, Hartford and Springfield; Connecticut River; Harlem; Housatonic, and Western, Mass., Railroads, where our cars are now in constant use.

Dec. 25, 1847.—17.

**SPRING STEEL FOR LOCOMOTIVES.** Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 4 to 6 inches in width, and of any thickness required; large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, Agent,  
Albany Iron and Nail Works,

**CHILLED RAILROAD WHEELS.**—THE undersigned are now prepared to manufacture their improved Corrugated Car Wheels, or Wheels with any form of Spokes or Disks, by a new process which prevents all strain on the metal, such as is produced in all other chilled wheels, by the manner of casting and cooling. By this new method of manufacture, the hubs of all kinds of wheels may be made whole—that is, without dividing them into sections—thus rendering the expense of banding unnecessary; and the wheels subjected to this process will be much stronger than those of the same size and weight, when made in the ordinary way.

A. WHITNEY & SON,

Willow St. below 13th,

Nov. 10, 1847. [U.] Philadelphia, Penna.

**PATENT HAMMERED RAILROAD, SHIP and Boat Spikes.** The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed.

JOHN F. WINSLOW, Agent.

Albany Iron and Nail Works, Troy, N. Y.

The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Etting, Philadelphia; Wm. E. Coffin & Co. Boston. ja45



**THE SUBSCRIBER** has on hand a good assortment of his best Leveling and Surveying Instruments, among them his improved Compass for taking angles without the needle—also Bells, suitable for Churches, Railroad Depots, etc.

ANDREW MENEELY,

West Troy, May 12, 1847.

17-21

**PATENT RAILROAD, SHIP AND BOAT Spikes.** The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York will be punctually attended to.

HENRY BURDEN, Agent.

Spikes are kept for sale, at Factory Prices, by & J. Townsend, Albany, and the principal Iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Jarviere, Baltimore; Degrand & Smith, Boston.

Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand.

ja45



# DAVENPORT & BRIDGES'

## CAR WORKS, CAMBRIDGEPORT, MASS.



Manufacture to Order, Passenger and Freight Cars of every description, and of the most improved pattern; also furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices.

All orders punctually executed and forwarded to any part of the country. Our Works are within fifteen minutes ride from State street, Boston—Omnibuses pass every fifteen minutes.

### FRENCH AND BAIRD'S PATENT SPARK ARRESTER.

TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved Spark-Arrester recently patented by the undersigned.

Our improved Spark-Arresters have been extensively used during the last year on both passenger & freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits.

R. L. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendent Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendent Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburgh and Jackson Railroad, Vicksburgh, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city or to Hinckley & Drury, Boston, will be promptly executed.

N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms.

The letters in the figures refer to the article given in the Journal of June, 1844.

THE SUBSCRIBER IS PREPARED TO execute at the Trenton Iron Works, orders for Railroad Iron of any required pattern, and warranted equal in every respect in point of quality to the best American or imported Rails. Also on hand and made to order, Bar Iron, Brasties and Wire Rops, etc., etc.

PETER COOPER,  
17 Barling Slip, New York.

### RAILROAD IRON, PIG IRON, ETC.

600 Tons of T Rail 60 lbs. per yard.  
25 Tons of 2½ by 1 Flat Bars.  
25 Tons of 2½ by 9-16 Flat Bars.  
100 Tons No. 1 Cast-iron.  
100 Tons Welsh Forge Pigs.  
For Sale by A. & G. RALSTON & CO.  
No. 4 So. Front St., Philadelphia.

### NEW YORK & HARLEM RAILROAD CO.—Summer Arrangement.—On and after Tuesday, June 1st, 1845, the cars

will run as follows, until further notice. Up trains will leave the City Hall for—Yorkville, Harlem and Morrisana at 6, 8 and 11 a.m., 2, 3, 5 and 7 p.m.

For Morrisiana, Fordham, Williams' Bridge, Tuckahoe, Hart's Corner and White Plains, 7 and 10 a.m., 4 and 5 30 p.m.

For White Plains, Pleasantville, Newcastle, Mechanicsville and Croton Falls, 7 a.m. and 4 p.m. Freight train at 1 p.m.

Returning to New York, will leave—Morrisiana and Harlem, 7, 8 30 and 9 a.m., 1, 3, 4 30, 6, 6 30 and 9 p.m.

Fordham, 8 05 and 9 15 a.m., 1 20 and 6 15 p.m. Williams Bridge, 8 and 9 05 a.m., 1 10, 6 08 p.m.

Tuckahoe, 7 35 and 8 25 a.m., 12 55 and 5 53 p.m. White Plains, 7 10 and 8 35 a.m., 12 50, 5 35 p.m.

Pleasantville, 8 15 a.m. and 5 15 p.m. Newcastle, 8 a.m. and 5 p.m.

Mechanicsville, 7 45 a.m. and 4 45 p.m. Croton Falls, 7 30 a.m. and 4 30 p.m. Freight

train at 10 a.m.

Freight train will leave 32d street for Croton Falls and intermediate places, 4 a.m. and City Hall 1 p.m. Returning, leave Croton Falls 10 a.m. and 9 p.m.

ON SUNDAYS, the trains will run as follows: Leave City Hall for Croton Falls, 7 a.m., 4 p.m. Croton Falls for City Hall, 7 30 a.m., 4 30 p.m.

Leave City Hall for White Plains and intermediate places, 7 and 10 a.m. 4 and 5 30 p.m.

White Plains for City Hall, 7 10 and 8 35 a.m., 12 30 and 5 35 p.m.

Extra trains will be run to Harlem, Fordham and Williams Bridge on Sunday, when the weather is fine.

The trains to and from Croton Falls will not stop on N. York island, except at Broome st. and 32d st.

A car will precede each train 10 minutes to take up passengers in the city.

Fare from New York to Croton Falls and Somers St., to Mechanicsville 87½c., to Newcastle 75c., to Pleasantville 62½c. to White Plains 50c.

### BOSTON AND MAINE RAILROAD.

Upper Route, to Portland and the East. Summer Arrangement.

Commencing April 17, 1845.

Trains leave Boston as follows, viz: For Portland at 7 A.M. and 2 P.M.

For Great Falls at 7 a.m., 2½ and 4½ p.m.

For Haverhill at 7 and 11½ a.m., 2½, 4½ and 5½ p.m.

For Reading 7, 9½, 11½ a.m., 2½, 4½, 5½ and 10 p.m.

Trains leave for Boston as follows, viz:

From Portland at 7 a.m., and 3 p.m.

From Great Falls at 6½ and 9½ a.m., and 4½ p.m.

From Haverhill at 6½, 8½ and 11 a.m., 3 and 6½ p.m.

From Reading at 6, 7½, 9½, 11½ a.m., 1½, 4, 7½, 9½ p.m.

MEDFORD BRANCH TRAINS.

Leave Boston at 7, 9 a.m., 12½, 2½, 4½, 7, 10 p.m.

Leave Medford at 6½, 7½, 10½ a.m., 2, 4, 6, 9½ p.m.

The Depot in Boston is on Haymarket Square.

CHAS. MINOT, Sup't.

Boston, April 15, 1845.

### BOSTON AND PROVIDENCE RAILROAD.

Summer Arrangement. On and after Monday, April 3, 1845, the

Trains will run as follows:

Steamboat Train—Leaves Boston daily, except Sunday, at 5 o'clock p.m.

Accommodation Trains—Leave Boston at 7 and 11 a.m. and 4 p.m., and Providence at 7½ and 11 a.m. and 4½ p.m.

Pawtucket Train—Leaves Boston at 4 p.m. and Pawtucket at 7, 10 a.m.

Dedham Trains—Leave Boston at 8 a.m., and 12½, 3½, 6½ and 9 p.m. Leave Dedham at 7 and 9½ a.m. and 2½, 5½ and 8 p.m.

Stoughton Trains—Leave Boston at 11½ a.m. and 5½ p.m. Leave Stoughton at 7, 10 a.m. and 3½ p.m.

WM. RAYMOND LEE, Sup't.

RAILROAD IRON AND LOCOMOTIVE

Tyres imported to order and constantly on hand by A. & G. RALSTON

Mar. 30th 4 South Front St., Phila. 11







